# IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

VERITASEUM CAPITAL, LLC,	)
Plaintiff,	)
v.	) C.A. No. 22-1253 (MN)
COINBASE GLOBAL, INC.,	) JURY TRIAL DEMANDED
Defendant.	)

# DEFENDANT'S OPENING BRIEF IN SUPPORT OF ITS <u>MOTION TO DISMISS COMPLAINT</u>

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# I. NATURE AND STAGE OF PROCEEDINGS

On September 22, 2022, Plaintiff Veritaseum Capital, LLC ("Plaintiff" or "Veritaseum") filed a Complaint for Patent Infringement and Demand for Jury Trial ("Complaint"), alleging that Defendant Coinbase Global, Inc.<sup>1</sup> ("Defendant" or "Coinbase") infringes U.S. Patent No. 11,196,566 (the "'566 patent"). D.I. 1 ("Compl."). On October 12, 2022, on Coinbase's motion, the Court extended the responsive pleading deadline to November 14, 2022. *See* D.I. 8. Pursuant to the Court's order and Federal Rule of Civil Procedure 12(b)(6), Coinbase hereby moves to dismiss Plaintiff's claims for failure to state a claim upon which relief may be granted.

# II. SUMMARY OF ARGUMENT

Coinbase moves for dismissal for two reasons: (1) the allegations of the Complaint, taken as true, are inconsistent with and contradict infringement; and (2) the claims are directed to patent ineligible subject matter under 35 U.S.C. § 101. This case is a nonstarter that warrants dismissal.

The Federal Circuit recognized that "a plaintiff may find it has pleaded itself out of court" where its own allegations are "*inconsistent* with and contradict infringement." *Bot M8 LLC v. Sony Corp. of Am.*, 4 F.4th 1342, 1354 (Fed. Cir. 2021) (emphasis in original). Plaintiff has done so here. Even under a liberal pleading standard, Plaintiff fails to state a plausible claim for relief because the allegations in the Complaint contradict infringement.

First, the Complaint asserts that certain claim limitations that appear in all claims are "not mandatory," "not applicable," or simply not present and therefore can be ignored. But as a matter of law, *every limitation must be present* to prove literal infringement. *See SIMO Holdings Inc. v. Hong Kong uCloudlink Network Tech. Ltd.*, 983 F.3d 1367, 1380-81 (Fed. Cir. 2021). Plaintiff's

<sup>&</sup>lt;sup>1</sup> By filing this motion, Coinbase Global does not concede that it is the proper defendant for allegations made in this lawsuit.

own admissions are fatal to its case. Moreover, the Complaint expressly conflates separate claim elements—a "computing device" and a "first client device"—to allege infringement. But in the face of a rejection during prosecution, the patentee canceled claims that expressly recited these devices as the same element. Prosecution disclaimer bars Plaintiff's present infringement theory. *Biogen Idec, Inc. v. GlaxoSmithKline LLC*, 713 F.3d 1090, 1095 (Fed. Cir. 2013). Dismissal is warranted. *See Amgen Inc v. Coherus BioScis. Inc.*, 931 F.3d 1154, 1160-61 (Fed. Cir. 2019).

Second, the Complaint should be dismissed because all claims of the '566 patent are invalid under 35 U.S.C. § 101. The use of a computing device to process traditional financial transactions (e.g., swaps, letters of credit) is an abstract idea and it was treated as such during prosecution. The sole issue is whether the inclusion of elements directed to well-known blockchain technologies adds a sufficiently novel "inventive concept" to transform the claims into patent-eligible subject matter. It does not. The patent describes these elements in its "Background Art" section of the specification, '566 patent col. 1:26-5:44, and they are indisputably part of the well-known "design and functioning of the Bitcoin protocol and progeny." The claims are invalid.

Finally, leave to amend should be denied. Because the Complaint cannot be amended without contradicting its allegations, amendment would be futile. *U.S. v. Corinthian Colls.*, 655 F.3d 984, 995 (9th Cir. 2011).

# III. STATEMENT OF FACTS

#### A. The Technology At Issue

This case concerns the processing of transactions using "blockchain" technology and "cryptocurrencies," such as prior art Bitcoin<sup>2</sup> and Ethereum blockchain cryptocurrency protocols

<sup>&</sup>lt;sup>2</sup> Bitcoin is an early cryptocurrency that was first introduced as a concept in late 2008. Decl. Ex. 9, Satoshi Nakamoto, <u>Bitcoin: A Peer-to-Peer Electronic Cash System</u>, at 1 (Mar. 2009) ("Bitcoin White Paper"). This paper is cited prior art to the '566 patent.

described in the background of the patent.<sup>3</sup> See D.I. 1-1 ("'566 patent") col. 2:33-49 (Background Art); 36:61-67 (Glossary); Compl. ¶¶ 26-29. "Blockchain is a technology underlying Bitcoin, Ethereum, and similar protocols. A blockchain is a shared database whose contents the participating computers agree about. It is composed of blocks of data—containing transactions, software code, or other material—linked together as a continuous chain." Decl. Ex. 11 (Vitalik Buterin, Proof of Stake: The Making of Ethereum and the Philosophy of Blockchains (Seven Stories Press 2022)) at 379. "Cryptocurrency is a general term for blockchain-based tokens that exhibit at least some (but usually not all) characteristics of traditional money, such as serving as a store of value or a medium of exchange." Id. "Protocols are sets of rules for how computers interact with each other on a shared network. . . . blockchain networks such as Bitcoin and Ethereum are defined by protocols . . . ." Id. at 383.

#### B. The '566 Patent

The '566 patent issued on December 7, 2021, based on a patent application filed May 5, 2015 (and a provisional patent application filed May 9, 2014). Of its 18 claims, the Complaint expressly identifies claims 1, 2, 3, 7, and 8. Compl. ¶ 50. Claim 1 is directed to a "computing device" that processes a "transaction between a first client device and a second client device" using a transfer mechanism "comprising a decentralized digital currency." '566 patent col. 38:18-21. Claim 7 is directed to a system comprising such a computing device and the first and second client devices. *Id.* col. 39:46-40:56. Dependent claims 2, 3, and 8 recite additional financial transactional operations, such as refunds. *Id.* claims 2, 3, 8.4

<sup>&</sup>lt;sup>3</sup> Bitcoin and Ethereum were known blockchain technologies at the time the '566 patent priority application was filed (May 2014), as the patent admits. *See* '566 patent, col. 2:40-43.

<sup>&</sup>lt;sup>4</sup> Claim 13 is directed to a method for processing a "transaction between a first client device and a second client device" using a transfer mechanism "comprising a decentralized digital currency."

The '566 patent explains that the alleged invention is directed to "systems and methods enabling parties with little trust or no trust in each other to enter into and enforce agreements conditioned on input from or participation of a third party." *Id.* col. 1:48-51. The transaction may occur "without special technical knowledge of the underlying transfer mechanism(s)." *Id.* col. 1:51-53. The patent includes embodiments concerning well-known forms of financial transactions that computers can implement: arbitrary swaps and letters of credit ("L/Cs"). *Id.* col. 1:60-2:67.

According to the '566 patent, Bitcoin and its progeny "operate by maintaining a whole or partial history or 'ledger' (sometimes referred to as a 'block chain') of all transactions that have been 'validated' by a consensus of network participants." *Id.* col. 2:40-49. An entity seeking to submit a new transaction "broadcasts" a "transaction record comprising the details of the desired transaction to a number of network participants." *Id.* col. 3:9-12. Those participants "attempt to independently validate the transaction record." *Id.* col. 3:12-13. If successful, "they rebroadcast the transaction record to their peers, and so on," until "an entity produces a child transaction that is accepted by a majority as valid, and whose input is associated with an unspent output from a parent transaction." *Id.* col. 3:19-23. According to the patent, the advantage of such systems lies in decentralization using blockchain technology such as Bitcoin, which enables transactions to occur without any centralized authority. *See id.* col. 3:63-67.

# C. The '566 Patent Prosecution History

During prosecution, the '566 patent was repeatedly rejected under 35 U.S.C. § 101 for claiming patent ineligible subject matter. On June 8, 2020, the examiner rejected the claims as directed to the abstract idea of a "value transfer between a first party and a second party," which involves "the organizing of human activity" and "fundamental economic practice." Decl. Ex. 1 (June 8, 2020 Office Action) at 5, 7-8. The examiner noted that the disclosure itself states that

"[t]he invention pertains to agreements among distinct parties that contemplate transfers of title to property, as well as any industry where that may be of value or importance." *Id.* at 8. In finding no inventive concept, the examiner noted the structural elements refer to a "generic computing environment" and are described in a manner that includes no technological improvement to their functioning, and the encryption capabilities require "no particular algorithm." *Id.* at 9.

In response, the patentees further amended the claims to recite additional elements—the same blockchain concepts described in the background section of the specification—including (1) creating a transaction by submitting a data record to a transfer mechanism comprising decentralized currency, (2) broadcasting the complete transaction record using the same transfer mechanism, and (3) effecting the transaction based on an observed external state. Decl. Ex. 2 (Dec. 8, 2020 Resp.) at 24-25. The patentees argued the claims were now directed to a "specific method for enabling increased security" where the computing device "alone does not control disposition" but only effects the transaction "with the participation of one of the first or second client device" while acting as a "distributed participant." *Id.* at 24. This purportedly "prevents the computer device from being commandeered to effect transaction not contemplated by at least one of the first or second client device." *Id.* at 25.

On January 27, 2021, the examiner maintained the rejections, noting that nothing "would indicate that the inventors viewed their invention as solving a security problem" and that decentralization "is also an abstract concept," such that the amendment "simply add[s] layers of abstraction to an abstract idea." Decl. Ex. 3 (Jan 27, 2021 Office Action) at 2-3. Likewise, he pointed out that the reference to verifying transactions using external states only describes "a form of business event and not a technological event" and that decentralization is not "unique to the internet world," being common in "barter economies." *Id.* at 3-4.

The patentees responded by further amending the claims to require a "distributed ledger," "broadcasting" data records "for recording in the distributed ledger," and having the client devices sign and validate the data records against the distributed ledger. Decl. Ex. 4 (July 27, 2021 Resp.) at 3-4. The patentees argued that the amended claims were now "directed to a specific computing device" that "comprises a distributed ledger, without the need for a trusted central authority," where the computing device "participates in the transaction" but "alone cannot control disposition." *Id.* at 24. Thus, according to the patentee, the "critical features of *decentralized digital currencies*, *a distributed ledger*, afford the novelty of a participating facilitator without also allowing that the computer device to control dispositions (without the need for a trusted central authority)." *Id.* at 33 (emphasis in original).

The examiner allowed the claims on October 19, 2021, citing as the reason: "Public key cryptography is present in the claim and . . . can be viewed as an additional element that forms a practical application of the abstract idea." Decl. Ex. 5 (Notice of Allowance) at 2-3.

# **D.** The Complaint

The Complaint alleges that the '566 patent covers blockchain validators, including validators for Ethereum. Compl. ¶ 23. According to the Complaint, an Ethereum "Validator" node "helps process and validate transaction blocks on the platform," *id.* ¶ 34, similar to the "network participants" that "attempt to independently validate the transaction record" described in the prior art section of the '566 patent. *See* '566 patent col. 3:12-13.

The Complaint alleges that Coinbase infringes because it "hosts and controls" Ethereum Validators on its Cloud service, and that the '566 patent "covers transactions conducted by [Ethereum] Validators." *Id.* ¶ 33. It identifies three theories of infringement. D.I. 1-3.

1. <u>Adding a new Ethereum Validator node</u> that involves paying a block reward to the new Ethereum Validator Node, *id.* at 1-27 (the "*New Node*" theory);

- 2. <u>Transactions over the Solana Network</u> that involve paying a transaction fee to a Solana Validator Node, *id.* at 28-68 (the "*Solana Transactions*" theory);
- 3. <u>Non-Fungible Token ("NFT") transfers using</u> the Ethereum network and Ethereum Validator Nodes, *id.* at 69-116 (the "*NFT Transfer*" theory).<sup>5</sup>

In addition to these charts, the Complaint includes two different lists of so-called accused "products." Compl. ¶ 36, 53. Plaintiff expressly accuses Coinbase of infringing at least claims 1, 2, 3, 7, and 8. *Id.* ¶ 28. But the Complaint does not identify any products that infringe any other claims, or even claims 3 and 8. *See id.* In light of the detailed claim charts that Plaintiff attached for claims 1, 2, and 7, they should be considered representative for purposes of this motion.

# IV. LEGAL STANDARD

Under Federal Rule of Civil Procedure 12(b)(6), a complaint must "contain sufficient factual matter . . . to 'state a claim to relief that is plausible on its face." *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). "[A] plausible claim must do more than merely allege entitlement to relief; it must support the grounds for that entitlement with sufficient factual content." *Bot M8*, 4 F.4th at 1353 (confirming standard in patent cases). If the alleged facts do not "nudge the claims across the line from conceivable to plausible, a complaint must be dismissed." *Twombly*, 550 U.S. at 570.

<sup>&</sup>lt;sup>5</sup> NFT refers to "a class of blockchain-based tokens intended to be a one of a kind, as opposed to cryptocurrencies, in which all tokens are interchangeable. NFTs are often used to demonstrate ownership of artworks, digital assets, and community membership." Decl. Ex. 11 (Buterin, PROOF OF STAKE) at 381.

<sup>&</sup>lt;sup>6</sup> Plaintiff accuses numerous products and services, including "APIs," and "software," that do not involve Coinbase hardware. Coinbase "does not provide its customers with any hardware in conjunction with its accused software" and therefore "does not make, sell, or offer for sale the complete invention." *See Synchronoss Techs., Inc. v. Dropbox, Inc.*, 987 F.3d 1358, 1368 (Fed. Cir. 2021) (rejecting software infringement of hardware claims).

Plaintiff has pled no plausible claim for relief for the purported and disparate products and services listed as "accused" and, as discussed below, even for the few "products" identified in Exhibit 3 to the Complaint, no plausible claim for relief has been stated.

"[T]o state a claim of direct [patent] infringement sufficient to withstand a motion to dismiss, a plaintiff must plead facts that plausibly suggest that the accused products meets *each limitation* of the asserted claim(s)." *Kajeet, Inc. v. Gryphon Online Safety, Inc.*, Nos. 19-2370 (MN), 20-1339 (MN), 2021 WL 780737, at \*3 (D. Del. Mar. 1, 2021) (emphasis added). In determining if the standard is met, "a court need not 'accept as true allegations that contradict matters properly subject to judicial notice or by exhibit,' such as the claims and the patent specification." *Yu v. Apple Inc.*, 1 F.4th 1040, 1046 (Fed. Cir. 2021) (citation omitted).

# V. ARGUMENT

# A. The Patent Infringement Allegations Are Implausible

Plaintiff has "pled itself out of court" by filing a complaint full of allegations that—taken as true—demonstrate *non*infringement. *See Bot M8*, 4 F.4th at 1353. The case need not go further.

# 1. The Allegations In the Complaint Contradict Infringement

"To prove literal infringement, the patentees must show that the accused device contains *each and every limitation* of the asserted claims." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1205 (Fed. Cir. 2014) (emphasis in original). By alleging that certain limitations are "optional" or not present in the accused products, Plaintiff have not only failed to allege facts that plausibly suggest infringement, they concede noninfringement, as summarized below.<sup>8</sup>

Infringement	Claim Limitation (all claims)	Complaint Claim Charts
Theory		(D.I. 1-3)
	wherein at least one of the first	"As the Computing Device and the
New Node theory	client device or the second client	First Client are the same device
	device signs the inchoate data	(Coinbase Ethereum Validator
	record and saves a copy of the	Node), the inchoate data record is
	inchoate data record on at least one	already signed by the First Client."
		(p. 22).

<sup>&</sup>lt;sup>8</sup> The Complaint does not allege infringement under the doctrine of equivalents. Nor could it—the doctrine "cannot be employed in a manner that wholly vitiates a claim limitation." *See SciMed Life Sys., Inc. v. Adv. Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1346-47 (Fed. Cir. 2001).

	of the first client device or the	
	second client device	
	wherein at least one of the first	"Note that it is <i>not mandatory</i> for
	client device or the second client	the inchoate data record to be saved
NET Transfer	device signs the inchoate data	by the device as it is optional as
NFT Transfer	record and saves a copy of the	described in the Patent general
theory	inchoate data record on at least one	description." (P. 84)
	of the first client device or the	
	second client device	
C - 1	publish the inchoate data record to	"Given the Computing Device and
Solana	at least one of the first client device	the First Client are the same device,
Transactions	or the second client device,	this clause is <i>not applicable</i> ." (P.
theory		42)
NFT Transfer theory	a network interface for receiving	"The approval by the NFT owner to
	terms, the terms comprising: an	sell or allow a transfer of ownership
	expiration timestamp	of the NFT is <i>implied to be infinite</i>
		as no explicit deadline is
		configurable." (P. 93)

First, each asserted claim requires at least one of the first or second client device to "sign[] the inchoate data record and save[] a copy of the inchoate data record." See '566 patent cl. 1, 7. For the New Node theory, the Complaint does not identify an operation for signing the data record but merely alleges that "[a]s the Computing Device and the First Client are the same device (Coinbase Ethereum Validator Node), the inchoate data record is already signed by the First Client." D.I. 1-3, at 22-23 (emphasis added). Likewise, for the NFT Transfer theory, the Complaint does not identify the required "saving" of the data record but alleges, despite the clear claim language reciting otherwise, that "it is not mandatory for the inchoate data record to be saved by the device as it is optional as described in the Patent general description." Id. at 84 (emphasis added). Plaintiff cannot disregard express claim limitations merely because other embodiments omit them. "[T]he claims, not the specification, provide the measure of the patentee's right to exclude." Johnson & Johnson Assoc. Inc. v. .R.W. Serv. Co., Inc., 285 F.3d 1046, 1052 (Fed. Cir. 2002). Plaintiff must prove that these limitations are met. The Complaint establishes they are not.

Second, each asserted claim requires "publish[ing] the inchoate data record to at least one of the first client device or the second client device." '566 patent cl. 1, 7. For the *Solana Transaction* theory of infringement, the Complaint once again identifies no aspect of the accused products that allegedly meets this limitation, on the ground that "[g]iven the Computing Device and the First Client are the same device, this clause is *not applicable*." D.I. 1-3, at 42. No claim limitations are "optional." *See Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (explaining that "[a]llowing a patentee to argue that [claim limitations] . . . are merely superfluous would render the scope of the patent ambiguous").

Third, each asserted claim requires receiving terms including an "expiration timestamp." '566 patent cl. 1, 7. For the *NFT Transfer* theory of infringement, Plaintiff fails to allege any expiration timestamp, and *expressly alleges its absence*. According to the Complaint, the "approval by the NFT owner" to enact the transaction is "implied to be infinite and *no explicit deadline is configurable*." D.I. 1-3, at 93 (emphasis added). This allegation is inconsistent with infringement. *See Bot M8*, 4 F.4th at 1353 (dismissing "inconsistent" allegations).

In light of its own fatal admissions, Plaintiff's allegations establish that at least one claim limitation is missing for *every claim* and *every theory of infringement*. The Complaint thus fails to state a plausible claim of infringement of any claim on any infringement theory and actually supports a finding of no infringement as a matter of law. *See id.* (finding infringement "not even possible, much less plausible" based on complaint allegations and dismissing allegations "inconsistent" with infringement); *SIMO*, 983 F.3d at 1380 (requiring "each and every limitation" to be present). Dismissal is appropriate on this ground alone.

# 2. The Complaint Conflates Distinct Elements

For every infringement theory identified in the Complaint, Plaintiff alleges that "[t]he Computing Device and the First Client are *the same device*." D.I. 1-3, at 2 (*New Node* theory), 28

(Solana Transactions theory), 87 (NFT Transfer theory) (emphasis added). The Complaint thereby conflates two distinct claim elements. Here, prosecution disclaimer is clear and unambiguous, precluding as a matter of law infringement based on this allegation.

First, Plaintiff's theory renders infringement implausible because it effectively ignores significant claim limitations. Claim 7 requires a "computing device" comprising a "first memory," "first network interface," and "first computer processor," and a "first client device" comprising a "second memory," "second network interface," and "second computer processor." '566 patent cl. 7. Plaintiff's theory neuters each of the "first client device" claim elements by allowing the same features identified for the "computing device" to meet each of the features for the "first client device." Thus, Plaintiff's infringement theory requires *reading out limitations*, which makes it implausible. *See Wasica Fin. GmbH. v. Cont'l Auto Sys., Inc.*, 853 F.3d 1272, 1288 n.10 (Fed. Cir. 2017) ("It is highly disfavored to construe terms in a way that renders them ... superfluous.").

Moreover, prosecution disclaimer unambiguously precludes this infringement theory. Here, original claim 13, dependent on original independent claim 12 (which issued as claim 7), recited: "the facilitator and the first client *are the same device*; the first computer processor and the second computer processor are the same processor; the first memory and the second memory [are] the same memory; and the first network interface and the second interface are the same network interface." Decl. Ex. 6 (Oct. 24, 2019 Resp.) at 10. Not surprisingly, the examiner rejected this claim, stating that "[i]t is unclear how one processor or memory can 'consist of' another processor or memory and still be considered as separate structure, particularly when they have

<sup>&</sup>lt;sup>9</sup> During prosecution, the patentees argued the computer device "is a *distributed participant* that works in connection with the first and second client device." Decl. Ex. 2 (Dec. 8, 2020 Resp.). at 25-26 (emphasis in original). If the computer device and first client device are the same, there is no "distributed participation." *Neville v. Found. Constr.*, *Inc.*, 972 F.3d 1350, 1357 (Fed. Cir. 2020) (no infringement where "no meaningful difference" between two claimed structures).

been assigned to separate pieces of structure." Decl. Ex. 7 (July 24, 2019 Office Action) at 3. The examiner further noted that because the computer device and first client device "were claimed as separate units of structure" in the independent claim, dependent claim 13 would be "removing a limitation." *Id.* In response, the patentees *canceled claim 13* without argument. Decl. Ex. 8 (Mar. 11, 2020 Resp.) at 10.

Here, plaintiff's theory of infringement is the same as the scope of the canceled claim:

Disclaimer (Canceled Original Claim 13)	Infringement Allegation
"the facilitator and the first client are the same	"The Computing Device and the First Client
device"	are the same device"

Disclaimer here can be resolved by the Court as a matter of law, given that there is no disputed issue of fact; the infringement theory plainly attempts to recapture the subject matter canceled by patentees in the face of rejection. By canceling claims that would have permitted the computing device and the first client device to be the same, Plaintiff disclaimed that subject matter. See, e.g., Schriber-Schroth Co. v. Cleveland Trust Co., 311 U.S. 211, 220-21 (1940) (noting "a claim in a patent as allowed must be read and interpreted with reference to claims that have been cancelled or rejected and the claims allowed cannot by construction be read to cover what was thus eliminated from the patent."). Accordingly, Plaintiff's infringement theory lacks plausibility to the extent it allows the recited computing device and the first client device to be the same device. See Ottah v. Fiat Chrysler, 884 F.3d 1125, 1141-42 (Fed. Cir. 2018) (affirming dismissal with prejudice where infringement theory is contrary to prosecution history estoppel).

The original term "facilitator" was amended to "computing device" during prosecution in one of Plaintiff's many attempts to overcome section 101. Decl. Ex. 2 (Dec. 8, 2020 Resp.).

# B. The Claims Are Invalid Under 35 U.S.C. § 101

As a separate ground for dismissal, the claims of the '566 patent are invalid under 35 U.S.C. § 101 because they each recite an abstract idea for using a computer to perform a financial transaction, adorned only with conventional, well-known limitations that fail to transform the claims into patent eligible subject matter. The Section 101 inquiry can be decided on a motion to dismiss because (1) the issue was analyzed extensively during prosecution, where the Plaintiff admitted that original claim 24 (now claim 13) can be treated as representative and identified specific limitations as providing the "critical features" for patent eligibility, *see* Decl. Ex. 2 (Dec. 8, 2020 Office Action) at 21, (2) the specification admits that these "critical features" were conventional aspects of blockchain technology, and (3) the Complaint makes no other factual allegations about patent eligibility, making dismissal appropriate. *See Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

# 1. <u>Legal Standard</u>

"Abstract ideas" are not patent-eligible subject matter. See 35 U.S.C. § 101. To determine if a patent claim is directed to patent-eligible subject matter, courts apply the two-step test articulated in Alice Corp. v. CLS Bank Int'l, 573 U.S. 208 (2014). In Alice Step 1, the court looks at the claims "in their entirety to ascertain whether their character as a whole is directed to excluded subject matter." Id. The focus is on the "claimed advance over the prior art." Simio, LLC v. FlexSim Software Prods, Inc., 983 F.3d 1353, 1359 (Fed. Cir. 2020). In Alice Step 2, if the claims fail step one, the court "examine[s] the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." See Univ. Secure Registry LLC v. Apple Inc., 10 F.4th 1342, 1346 (Fed. Cir. 2021).

# 2. <u>Claim 7 Is Representative</u>

Claim 7, shown below, is equally representative as claim 13 for the purposes of the 101 analysis (having the same limitations).<sup>11</sup>

7. A system for processing *a transaction* between a first client device and a second client device *via a transfer mechanism*, the system comprising a computing device, the first client device, the second client device, and the transfer mechanism;

the *computing device* comprising:

a *first memory* comprising for storing a first asymmetric key pair, the first asymmetric key pair comprising a first private key and a first public key;

a *first network interface* for receiving terms, the terms comprising: at least one of a first principal data or a second principal data; a reference to at least one of a first data source or a second data source; and an expiration timestamp; and

a *first computer processor* coupled to the first memory and the first network interface, the first computer processor configured to:

read the first private key from the first memory;

compute a first cryptographic signature from the first private key;

**create an inchoate data record** comprising: a commit input for receiving a commit data from a commit transaction; one or more outputs obtained from at least one of the first principal data or the second principal data, and a value data from at least one of the first data source or the second data source; and the first cryptographic signature; and

**publish the inchoate data record** to at least one of the first client device or the second client device;

the first client device comprising:

a second memory for storing a second asymmetric key pair, the second asymmetric key pair comprising a second private key and a second public key;

a second network interface; and

The other independent and dependent claims add additional data processing steps, generic encryption, and refunds, which are insufficient for the same reasons stated here. Blue highlighting identifies limitations relating to cryptography and yellow highlighting identifies the limitations added by July 2021 amendment in response to the examiner's 101 rejections.

a *second computer processor* coupled to the second memory and the second network interface, the second computer processor configured to:

**read the second private key** from the second memory;

read the inchoate data record;

**compute a second cryptographic signature** from the second private key;

**create a complete data record** comprising: the commit input; the output data; the first cryptographic signature; and the second cryptographic signature; and

**create a transaction** by submitting the complete data record to the transfer mechanism;

the second client device comprising: . . .

wherein the at least one of the first client device or the second client device signs the inchoate data record and saves a copy of the inchoate data record on at least one of the first client device or the second client device,

wherein the transfer mechanism *comprising a decentralized digital currency* that comprises a *distributed ledger* that enables processing the transaction between the first client device and the second client device without the need for a trusted central authority,

wherein the transaction is created by *broadcasting the complete data record* for transmitting and receiving among network participants in the computer network for recording in the distributed ledger, and

wherein at least one of the computer device, the first client device, or the second client device *verifies the recording of the complete data record* in the distributed ledger by observing an external state.

# 3. The Claims Are Directed To An Abstract Idea (Alice Step 1)

With respect to *Alice* step 1, the claimed subject matter as a whole is directed to processing transactions, including economic or financial ones, through a decentralized digital currency network without the need for a trusted intermediary. The specification states that "the invention pertains to . . . enabling with little trust or no trust in each other to enter into and enforce agreements conditioned on input from or participation of a third party," '566 patent col. 5:48-51, and provides examples such as letters of credit, arbitrary swaps, and other basic financial transactions, *id.* col. 5:61-7:5. The claims focus on creating such transactions by forming a "data record." The economic

transactions are not patent eligible. See Elec. Comm'n Techs., LLC v. ShopperChoice, LLC, 958 F.3d 1178, 1182 (Fed. Cir. 2020) ("longstanding commercial practices do not pass step one" of Alice). And performing them using a third-party intermediary without the need for trusted central authority adds nothing. Such decentralization is itself an abstract concept that does not make otherwise longstanding economic practices patentable. See Decl. Ex. 3 (Jan. 27, 2021 Office Action) at 2-3 (examiner finding that decentralization is an abstract concept). Plaintiff has not pled otherwise in the Complaint.

# 4. The Claims Fail To Recite An Inventive Concept (Alice Step 2)

Moving to *Alice* step 2, the claims fail to recite an inventive concept sufficient to transform the abstract idea into a patent-eligible application. It is instructive to review the claim limitations beyond the abstract idea, which fall in three categories: generic computer components and data, conventional blockchain-related features, and generic cryptography.

Generic Components And Data. The claims recite generic computer components, e.g., "memory," "computer processor," and "network interface," much like the "purely functional and generic" components rejected in Alice. See 573 U.S. at 226 ("communications controller" and "data storage unit"). For the same reasons stated in Alice, these cannot supply an inventive concept. Id. The claims similarly recite generic data transfers (e.g., commit inputs, publishing a data record, broadcasting a data record), which are also insufficient. See Elec. Comm'n Techs., 958 F.3d at 1182 ("gathering, storing, and transmitting information" is not enough).

Conventional Blockchain Features. Beyond generic components and data transfers, the claims recite well-known aspects of blockchain technology, such as a "distributed ledger." That is no accident. These limitations (highlighted in yellow in the quote of claim 7 above) were added during prosecution to overcome a Section 101 rejection. See Decl. Ex. 4 (July 27, 2021 Resp.). Specifically, during prosecution, the patentee argued that the "critical features of decentralized"

digital currencies, a distributed ledger," recited in these limitations, "afford the novelty of a participating facilitator without also allowing the computer device to control dispositions (without the need for a trusted central authority)." Decl. Ex. 4 (July 27, 2021 Resp.) at 33 (emphasis added). 

\*But\* problematically for the patentee, \*the patent specification admits that these "critical features"\*

\*were conventional\*, which means that they cannot supply an inventive concept. See Univ. Secure Registry, 10 F.4th at 1346.

For example, the specification describes as "background art" aspects of "decentralized digital currencies" such as "Bitcoin." *See* '566 patent col. 1:26-5:44, 2:40-43 ("Bitcoin protocol and progeny (Ethereum, Litecoin, etc.) . . . have recently enjoyed meteoric rises in popularity"). These "particular decentralized digital currencies *generally operate* by maintaining a whole or partial history or '*ledger*' . . . of all transactions that have been 'validated' by a consensus of network participants." *Id.* col. 2:44-49 (emphasis added). "The 'block chain' is a *public ledger* that *records* bitcoin *transactions*," which can be accomplished "without any trusted central authority." *Id.* col. 3:63-4:19. "Each network node stores its own copy of the blockchain," and "digitally sign[s] the transaction" using its "private key." *Id.* col. 4:7-8, 4:30-37. The ledger is then "broadcast" to the "network participants." *Id.* at col. 3:8-13. The transaction may be validated using an external event. *Id.* at col. 4:63-64. The chart below summarizes the *admitted* conventionality of each of the "critical features" added during prosecution in an attempt to overcome a 101 rejection:

Claim Limitation Added During Prosecution	Applicant Admitted Prior Art ('566 Patent Specification, emphasis added)
wherein the decentralized digital currency comprises a <i>distributed ledger</i> that enables processing the transaction between the first	"decentralized digital currencies generally operate by maintaining a <i>whole or partial history or 'ledger'</i> (sometimes referred to as a 'block chain') of all transactions that have

Claim Limitation Added During Prosecution	Applicant Admitted Prior Art ('566 Patent Specification, emphasis added)
client device and the second client device without the need for a trusted central authority	been 'validated' by a <i>consensus of network</i> participants." ('566 patent col. 2:44-49.)
	"The "block chain" is a public <i>ledger</i> that records bitcoin transactions. A novel solution <sup>12</sup> accomplishes this <i>without any trusted central authority</i> : maintenance of the block chain is performed by a network of communicating nodes running bitcoin software." ( <i>Id.</i> col. 3:63-67.)
wherein the inchoate data record is used by at least one of the first client device or the second client device to create a complete data record and to create the transaction by broadcasting the complete data record for transmitting and receiving among network participants in the computer network for recording in the distributed ledger	"[T]he entity seeking to submit a new transaction to the ledger <i>transmits</i> (or 'broadcasts') a transaction record comprising the details of the desired transaction to a number of network participants then known to the entity (or 'peers')." (Id. col. 3:8-13.)
wherein at least one of the first client device or the second client device <i>signs</i> the inchoate data record <i>and saves</i> a copy of the inchoate data record on at least one of the first client device or the second client device	"Ownership of bitcoins implies that a user can spend bitcoins associated with a specific address. To do so, a payer must digitally <i>sign</i> the transaction using the corresponding private key The network verifies the signature using the public key." ( <i>Id.</i> col. 4:30-37.)  "[E]ach network node <i>stores</i> its own copy of
wherein the at least one of the computing device, the first client device, or the second client device <i>verifies</i> the recording of the complete data record in the distributed ledger by observing an external state	"The block chain is a distributed database; in order to independently <i>verify</i> the chain of ownership of any and every bitcoin (amount), each network node stores its own copy of the block chain" ( <i>Id.</i> col. 4:5-8.)

The "novel solution" in this paragraph refers to bitcoin, not the invention of the '566 patent. Decl. Ex. 10, Antonopoulos, <u>Mastering Bitcoin</u>, 15 (Dec. 2014 O'Reilly Media Inc.) ("Instead of a central trusted authority, in bitcoin, trust is achieved as an emergent property from the interactions of ... participants....").

Because the specification admits the conventionality of the "critical features," they cannot supply an "inventive concept" sufficient to recite a patent-eligible application. *See Univ. Sec. Registry*, 10 F.4th at 1357-58 (rejecting inventive concept on motion to dismiss that specification describes as conventional).

Conventional Cryptographic Signatures. The Court may wonder why the claims were allowed during prosecution. The examiner noted that limitations relating to public key cryptography<sup>13</sup> "can be viewed as an additional element that forms a practical application of the abstract idea" and could not be performed by a human. Decl. Ex. 5 (Notice of Allowance) at 2-3. But the examiner failed to acknowledge that the specification admits that public key cryptography was a well-known, fundamental aspect of blockchain technology. Figure 24 of the specification—which is labeled "prior art"—shows exactly this. See '566 patent Fig. 24. 14

Generic encryption techniques have been rejected as "inventive concepts" capable of transforming an abstract idea into a patent-eligible application of that idea. *See, e.g., Univ. Secure Registry*, 10 F.4th at 1352 (encrypted authentication); *PersonalWeb Techs.*, 8 F.4th at 1318 (cryptographic hashes); *Walker Digital, LLC v. Google, Inc.*, 66 F. Supp. 3d 501, 513 (D. Del. 2014) (cryptographic operations and keys); *Rady v. Bos. Consulting Grp., LLC*, No. 1:20-CV-02285 (ALC), 2022 WL 976877, at \*3 (S.D.N.Y. Mar. 31, 2022) ("Blockchain Authentication"); *Blue Spike, LLC v. Google Inc.*, No. 14-CV-01650-YGR, 2015 WL 5260506, at \*8 (N.D. Cal. Sept. 8, 2015) (digital signatures), *aff'd*, 669 F. App'x 575 (Fed. Cir. 2016). The patentees admit

<sup>13</sup> These limitations are highlighted in blue in claim 7 above.

Fig. 24 was copied from the Bitcoin White Paper, which is a famous document and is cited prior art to the patent. Decl. Ex. 9, Bitcoin White Paper. *See also* Decl. Ex. 10, Antonopoulos, Mastering Bitcoin, 61-65 (Dec. 2014 O'Reilly Media Inc.) ("Every bitcoin transaction requires a valid signature . . . , which can only be generated with valid digital keys . . . . Keys come in pairs consisting of a private (secret) key and a public key. Think of the public key as similar to a bank account number and the private key as similar to the secret PIN . . . .").

in the specification that use of asymmetric key pairs to calculate cryptographic signatures was well known. Thus the use of cryptographic keys does not transform the claim from an abstract idea that is not patent eligible into a patent eligible novel application.

Accordingly, the claims fail to supply an "inventive concept" beyond the abstract idea of third-party mediated transactions performed over the well-understood blockchain technology and are therefore invalid. *See Alice*, 573 U.S. at 223 ("[s]tating an abstract idea while adding the words 'apply it with a computer" is insufficient under section 101).

# C. Leave to Amend Should Be Denied

Leave to amend should also be denied here as Plaintiff could only overcome the issues described above by contradicting prior allegations. "[L]eave to amend is [only] warranted if the deficiencies can be cured with additional allegations that are consistent with the challenged pleading and that *do not contradict the allegations in the original complaint*." *Corinthian Colls.*, 655 F.3d at 995. Here, to plead a plausible claim, Plaintiff would have to make new allegations that contradict its current allegations. The Court need not indulge such about-face allegations. *See*, *e.g.*, *Bot M8*, 4 F.4th at 1357-58 (no abuse of discretion in denial of leave to amend); *Lyda*, 838 F.3d at 1340-41 (same). An amendment would only waste the Court's and parties' time and resources. Furthermore, amendment would also be futile because the claims are invalid under Section 101 and Plaintiff cannot add allegations contrary to the specification and prosecution history. *See Simio*, 983 F.3d at 1364-65 (affirming futility-based dismissal without leave); *Yu*, 1 F.4th at 1046 (allegations contrary to specification disregarded).

# VI. CONCLUSION

For the foregoing reasons, Coinbase respectfully requests that the Court dismiss Plaintiff's claims for patent infringement with prejudice.

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November 14, 2022

# **CERTIFICATE OF SERVICE**

I hereby certify that on November 14, 2022, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF, which will send notification of such filing to all registered participants.

I further certify that I caused copies of the foregoing document to be served on November 14, 2022, upon the following in the manner indicated:

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